



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-1107; Directorate Identifier 2011-NM-216-AD; Amendment 39-18143; AD 2015-08-07]

RIN 2120-AA64

Airworthiness Directives; Zodiac Aerotechnics (formerly Intertechnique Aircraft Systems) Oxygen Mask Regulators

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain Zodiac Aerotechnics (formerly Intertechnique Aircraft Systems) oxygen mask regulators. This AD was prompted by a report of a malfunctioning mask having an inflatable harness with a high premature rupture rate due to defective silicon. This AD requires inspecting and replacing defective harnesses with new or modified serviceable units. We are issuing this AD to detect and correct defective harnesses, which could lead, in case of a sudden depressurization event, to a harness rupture, thereby providing inadequate protection against hypoxia and possibly resulting in unconsciousness of the affected flightcrew member and consequent reduced control of the airplane.

DATES: This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2012-1107>; or in person at the Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC.

For Zodiac Aerospace service information identified in this AD, contact Zodiac Services, Technical Publication Department, Zodiac Aerotechnics, Oxygen Systems Europe, 61 Rue Pierre Curie - CS20001, 78373 Plaisir Cedex, France; phone: (33) 01 61 34 23 23; fax: (33) 01 30 55 71 61; email: yann.laine@zodiacaerospace.com; Internet: www.services.zodiacaerospace.com. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2012-1107.

FOR FURTHER INFORMATION CONTACT: Ian Lucas, Aerospace Engineer, Boston Aircraft Certification Office (ACO) ANE-150, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803;

phone: 781-238-7757; fax: 781-238-7170; email: ian.lucas@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain Zodiac Aerotechnics (formerly Inter technique Aircraft Systems) oxygen mask regulators. The NPRM published in the Federal Register on October 25, 2012 (77 FR 65148).

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Airworthiness Directive 2011-0090R1, dated July 13, 2011 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to detect and correct an unsafe condition on certain Zodiac Aerotechnics (formerly Inter technique Aircraft Systems) oxygen mask regulators. The MCAI states:

A malfunction of a quick donning mask was reported to [Zodiac Aerotechnics (formerly) Inter technique [Aircraft Systems], who initiated an investigation in order to detect the root cause and the failure mode. Despite the fact that the analysis did not lead to any final conclusion, discrete suspected silicon batches have been identified which have shown an unusually high premature rupture rate.

Some of the affected harnesses are known to have been delivered as spares. Consequently, an inflatable harness belonging to one of the suspect batches may have become installed on an Oxygen Mask Regulator, the serial number (s/n) or [part number] P/N of which is not identified in Appendix II of Inter technique [Zodiac Aerospace] Service Bulletin (SB) MXH-35-240.

This fact widens the Applicability of this [EASA] AD to extend beyond the individual Oxygen Mask Regulators

identified by s/n and P/N in Appendix II of the SB.

This condition, if not detected and corrected, could lead, in case of a sudden depressurization event, to a harness rupture, thereby providing inadequate protection against hypoxia of the affected flight crew member, possibly resulting in unconsciousness and consequent reduced control of the aeroplane.

For the reasons described above, this [EASA] AD requires the identification and replacement of all potentially defective harnesses with serviceable units.

Note 1: The affected batches were installed on harnesses manufactured between December 2008 and August 2010, having dates codes 0850S (week 50 of 2008) through 1031S (week 31 of 2010).

Note 2: Harness assemblies that do not have a batch code were manufactured before week 33 of 2008 and are not affected by this unsafe condition.

This [EASA] AD has been revised to correct a typographical error in the Applicability, which inadvertently referred to P/N MA10-12 masks, whereas in fact, all P/N MA10 series could have an affected harness installed. In addition, this revised [EASA] AD corrects Note 2 (above), which confused harness manufacturing date codes with the affected harnesses batch codes.

This [EASA] AD is also revised to make reference to the latest revisions of the referenced Inter technique [Zodiac Aerospace] service publications which identify by s/n and P/N, in Appendix II of the SB, more oxygen mask regulators that are known or suspected to have an affected harness installed. Finally, this [EASA] AD is revised to add a Note to the Required Actions section, to stress the fact that other oxygen mask regulators could be affected, in addition to those listed in Appendix II of the SB.

You may examine the MCAI in the AD docket on the Internet at

<http://www.regulations.gov/#!documentDetail;D=FAA-2012-1107-0003>.

Actions Since the NPRM (77 FR 65148, October 25, 2012) was issued

We have reviewed Zodiac Aerospace Service Bulletin MXH-35-241, Revision 3, dated June 23, 2011. The NPRM referenced Zodiac Aerospace (formerly Inter Technique Aircraft Systems) Service Bulletin MXH-35-241, Revision 2, dated May 19, 2011, as one of the appropriate sources of service information for the required actions. Zodiac Aerospace Service Bulletin MXH-35-241, Revision 3, dated June 23, 2011, corrected typographical errors and updated a flow chart, but specifies the same procedures as the earlier revision.

We have revised the references in paragraphs (g) and (h) of this AD to refer to Zodiac Aerospace Service Bulletin MXH-35-241, Revision 3, dated June 23, 2011, as one of the appropriate sources of service information for the required actions. We have also added Zodiac Aerospace Service Bulletin MXH-35-241, Revision 2, dated May 19, 2011, to paragraph (l) of this AD to allow credit for previous actions done using that service information.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM (77 FR 65148, October 25, 2012) and the FAA's response to each comment.

Request to Revise Service Information Contact

Zodiac Aerotechnics (formerly Inter Technique Aircraft Systems) requested revising the contact address, telephone number, and website in paragraph (n)(2) of the

NPRM (77 FR 65148, October 25, 2012) to read “61 Rue Pierre Curie CS20001,” and “telephone: (33) 1 61 34 23 23,” and “www.services.zodiac aerospace.com.”

We have revised this AD to identify the legal name of the manufacturer as published in the most recent technical service order for crewmember demand oxygen masks. Intertechnique Aircraft Systems changed its legal name to Zodiac Aerotechnics; therefore we revised the manufacturer name in the SUMMARY and ADDRESSES sections, and “Applicability” and “Material Incorporated by Reference” paragraphs of this AD. We have changed this contact information in the ADDRESSES section of this final rule and paragraph (o)(3) of this AD accordingly.

Request to Withdraw NPRM (77 FR 65148, October 25, 2012) or Revise Compliance Time

American Airlines (American) requested that we withdraw the NPRM (77 FR 65148, October 25, 2012). Based on Boeing’s analysis referenced in a Boeing Service Letter, American disagreed with the need for the NPRM. American stated that the concern in the NPRM has been reviewed by Boeing for potential safety and was found not to be safety-based on a numerical risk assessment. American stated that if we do not withdraw the NPRM, it requests that we extend the threshold specified in the NPRM to a minimum of 3 years.

We do not agree with the commenter’s request to withdraw the NPRM (77 FR 65148, October 25, 2012) or extend the compliance time. We agree with the EASA’s finding of an unsafe condition, as explained in EASA AD 2011-0090R1, dated July 13, 2011, as well as the compliance time for taking corrective action that is specified in the EASA AD 2011-0090R1. However, affected operators may request

approval of an alternative method of compliance (AMOC) for an extension of the compliance time for the inspection under the provisions of paragraph (m) of this AD by submitting data substantiating that the change would provide an acceptable level of safety. We have not changed this AD in this regard.

Request to Clarify Affected Airplanes for Inspection and Replacement Requirements

Horizon Air requested that paragraphs (g)(1), (g)(2), (h), and (k) of the NPRM (77 FR 65148, October 25, 2012) be revised for clarity. Horizon stated the NPRM appears to address only the “as delivered” condition of the airplanes. Horizon indicated the NPRM stated that Zodiac Aerospace Service Bulletin MXH-35-240, Revision 7, dated September 1, 2011, applies “for all aircraft other than Bombardier airplanes,” and Zodiac Aerospace Service Bulletin MXH-35-241, Revision 3, dated June 23, 2011, applies “for Bombardier airplanes.” Horizon stated this is incorrect since Zodiac Aerospace Service Bulletin MXH-35-240, Revision 7, dated September 1, 2011, could apply to Bombardier airplanes if the crew oxygen masks delivered with the airplanes were removed and replaced with masks listed in Zodiac Aerospace Service Bulletin MXH-35-240, Revision 7, dated September 1, 2011.

We acknowledge the commenter’s concern that it may be possible that a harness on a Bombardier airplane may be replaced with one listed in Appendix I of Zodiac Service Bulletin MXH-35-240, Revision 7, dated September 1, 2011, during the maintenance of the airplane. However, this AD corresponds to EASA AD 2011-0090R1, dated July 13, 2011, which specifies using Zodiac Aerospace Service Bulletin MXH-35-241, Revision 3, dated June 23, 2011, for Bombardier airplanes. The suggested

changes would alter the actions currently proposed in the NPRM (77 FR 65148, October 25, 2012), so additional rulemaking would be required.

We find that delaying this action would be inappropriate in light of the identified unsafe condition. Therefore, we have not changed this AD regarding this issue. However, we might consider further rulemaking if EASA issues additional rulemaking or we determine that an additional inspection of Bombardier airplanes for harnesses identified in Appendix I of Zodiac Service Bulletin MXH-35-240, Revision 7, dated September 1, 2011, is necessary.

Request to Revise Regulatory Paragraph into a Note

United Airlines (United) requested that we change paragraph (g)(2) of the NPRM (77 FR 65148, October 25, 2012) to a note. United contends that paragraph (g)(2) of the NPRM is worded as a clarification as to whether an operator can use Appendix II of Zodiac Service Bulletin MXH 35 240, Revision 7, dated September 1, 2011; or Appendix II of Zodiac Service Bulletin MXH 35 241, Revision 3, dated June 23, 2011; alone in demonstrating compliance to the AD.

We agree that the wording in paragraph (g)(2) of the NPRM (77 FR 65148, October 25, 2012) is informational and is meant to clarify that using Appendix II of Zodiac Service Bulletin MXH 35 241, Revision 3, dated June 23, 2011 alone is not allowed. We have re-designated paragraph (g)(2) of the NPRM as Note 1 to paragraph (g) of this AD. We have also re-designated paragraph (g)(1) of the NPRM as paragraph (g) of this AD.

Request to Revise Compliance Time

Air Wisconsin Airlines (Air Wisconsin) requested that the phrase “Before further flight” specified in paragraph (h) of the NPRM (77 FR 65148, dated October 25, 2012) be replaced using a compliance time of “Within 24 months after the effective date of this AD,” to match the compliance time specified in paragraph (g)(1) of the NPRM.

Air Wisconsin stated paragraph (g)(1) of the NPRM would require an inspection to determine if the part number and batch number of the inflatable harness are listed in Appendix I of Zodiac Service Bulletin MXH-35-241, Revision 2, dated May 19, 2011.

We agree with the commenter’s request because the intent of this final rule is to replace affected harnesses within a compliance time of 24 months. We have changed the compliance time in paragraph (h) of this AD to read, “Within 24 months after the effective date of this AD.”

Request to Revise Exception Paragraph to Include Date of Manufacture (DMF) Codes

American requested that the list of excluded part numbers specified by paragraph 1.A.(4) of Zodiac Service Bulletin MXH-35-240, Revision 7, dated September 1, 2011, be included in paragraph (i) of the NPRM (77 FR 65148, October 25, 2012), for clarity.

We agree with the commenter’s request to include the excluded part numbers because the list of excluded oxygen mask regulators specified by paragraph 1.A.(4), “Not Concerned Equipment,” of Zodiac Service Bulletin MXH-35-240, Revision 7, dated September 1, 2011, is not directly captured in the content of this AD. We have changed paragraph (i) of this AD to include those part numbers listed in paragraph 1.A.(4), “Not

Concerned Equipment,” of Zodiac Service Bulletin MXH-35-240, Revision 7, dated September 1, 2011.

Request to Revise Applicability

American requested that paragraph (c) of the NPRM (77 FR 65148, October 25, 2012) be revised to state the AD is applicable only to harnesses having DMF codes between (0850S) and (1031S). American explained that the corresponding EASA AD 2011-0090R1, dated July 13, 2011, requires the identification and replacement of “all potentially defective harnesses.” American explained that specifying which harnesses had affected DMF codes would provide clarity.

We disagree with the commenter’s request to revise the applicability specified in paragraph (c) of this AD. The applicability specified in paragraph (c) of this AD identifies affected oxygen mask regulators since harnesses can be rotated and replaced on the oxygen mask regulators. We also note that DMF codes apply to the regulators and not the harnesses.

However, we note that paragraph (i) of this AD does clarify which harnesses are affected by the inspection and replacement requirements of paragraphs (g) and (h) of this AD. Paragraph (i) of this AD also states that oxygen mask regulators having certain DMF codes are excluded from the inspection and replacement requirements of paragraphs (g) and (h) of this AD. No change has been made to this AD in this regard.

Request to Clarify Affected Oxygen Mask Regulators

United requested we revise paragraph (i) of the NPRM (77 FR 65148, October 25, 2012) by adding the words “having a part number and batch number identified in Appendix I of the service information specified in paragraph (i)(1) or (i)(2) of this AD” to clarify which masks are subject to inspection and replacement requirements. United also requested that we revise paragraph (i) of the NPRM by specifying that the part number and batch number are those of the “harness assembly,” and the date of manufacturing is that of the “mask assembly.”

We agree with the commenter’s request for the reasons provided by the commenter. We have revised paragraph (i) of this AD accordingly.

Request to Carry Forward Exceptions and Allow Original Equipment Manufacturer (OEM) Date in Lieu of DMF Code

Boeing requested that we revise the NPRM (77 FR 65148, October 25, 2012) to allow the exceptions of paragraph (i) of the NPRM to carry forward into paragraph (k) of the NPRM for the parts installation prohibition for new production aircraft. Boeing also requested that we revise the NPRM to allow the date on which an oxygen mask was serviced for remanufacture or overhaul by the OEM to replace the date of manufacture of the original mask. Boeing contends that, where inflatable harnesses have been serviced, the OEM meets all existing AD requirements.

We disagree with both requests for allowing the exceptions to carry forward and to allow the date of service to replace the date of manufacture because the root cause of the defective oxygen masks is a high premature rupture rate due to defective silicon. This manufacturing defect affected a specific manufacturing batch. Thus, it is possible

that a mask overhaul may not necessarily address the root cause or unsafe condition.

Also, since oxygen mask regulators are rotatable parts, it is possible that an oxygen mask regulator can be rotated onto a new production aircraft once it is in service. No change has been made to this AD in this regard.

Request to Revise Wording in Paragraph (k) of the NPRM (77 FR 65148, October 25, 2012)

American and Horizon Air requested we revise paragraph (k) of the NPRM (77 FR 65148, October 25, 2012) by replacing the word “install” with the word “replace.” American stated if the oxygen mask/regulator is removed to facilitate maintenance prior to the compliance date of the AD, the NPRM, as written, would prohibit operators from re-installing the crew oxygen mask/regulator and would require immediate installation of a new or re-identified harness in order to comply with the AD. Horizon stated that the use of the word “install” effectively reduces the compliance time to perform the inspection and replacement specified by paragraphs (g) and (h) of the NPRM. American stated this clarification would allow operators adequate time to remove and re-install a crew oxygen mask/regulator to facilitate maintenance prior to the compliance date.

United stated that, while paragraph (h) of the NPRM (77 FR 65148, October 25, 2012) clearly stated the replacement requirement, United had concerns regarding Zodiac Service Bulletin MXH-35-240, Revision 7, dated September 1, 2011. We contacted United for clarification. Where paragraph 3.C. of the Accomplishment Instructions of Zodiac Service Bulletin MXH-35-240, Revision 7, dated September 1, 2011, uses the word “modification,” United suggested using the word “replacement.”

We agree to provide clarification. The intent of the “Parts Installation Prohibition” specified in paragraph (k) of this AD is that operators replace parts with good parts rather than bad parts. Although the words “install,” and “modification” are generally considered to be broader than the word “replace,” for purposes of this AD, these words should be interpreted as meaning “replace” while remaining within the spirit and intent of the AD. Therefore, simply reinstalling the same part during maintenance activities is acceptable for compliance with the requirements of paragraph (k) of this AD for that reinstallation. However, if an inflatable harness has a part number and batch number identified as being from a defective batch during the inspection required by paragraph (g) of this AD, paragraph (h) of this AD requires replacement before further flight. We have not changed the final rule regarding this issue.

Request to Reference Flow Chart Contained in Service Information

Boeing requested that paragraph (k) of the NPRM (77 FR 65148, October 25, 2012) be revised by adding the words “This determination can be made by following the flow chart contained in paragraph 3., “Accomplishment Instructions,” of Zodiac Service Bulletin MXH-35-240, Revision 7, dated September 1, 2011.” Boeing stated that, by adding these words, the NPRM would match EASA AD 2011-0090 R1, dated July 13, 2011. Boeing stated the flow chart includes an acceptance decision based on the letter “I” written on the bushing of the inflatable harness of the crew oxygen mask to indicate it has been inspected using this service information.

We agree with the commenter’s request because using the flow chart in paragraph 3., “Accomplishment Instructions,” of Zodiac Service Bulletin MXH-35-240,

Revision 7, dated September 1, 2011, reflects the current method to determine whether a mask needs to be replaced. We have revised paragraph (k) of this AD by referring to the flow chart contained in paragraph 3., “Accomplishment Instructions,” of Zodiac Aerospace Service Bulletin MXH-35-240, Revision 7, dated September 1, 2011, to determine if parts are not listed in Appendix I of Zodiac Aerospace Service Bulletin MXH-35-240, Revision 7, dated September 1, 2011.

We have also removed the reference to Zodiac Aerospace Service Bulletin MXH-35-241, Revision 2, dated May 19, 2011, from paragraph (k) of the NPRM (77 FR 65148, October 25, 2012), in order to match EASA AD 2011-0090 R1, dated July 13, 2011. For all airplanes, the parts listed in Appendix I of Zodiac Aerospace Service Bulletin MXH-35-240, Revision 7, dated September 1, 2011, may not be installed.

Removal of “Airworthy Product” Paragraph from this AD

We have removed paragraph (m)(2) of the NPRM (77 FR 65148, October 25, 2012) since the airworthy product statement regarding contacting the manufacturer or other sources is unnecessary in this AD. We redesignated paragraph (m)(1) as paragraph (m) of this AD.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (77 FR 65148, October 25, 2012) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (77 FR 65148, October 25, 2012).

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

Related Service Information under 1 CFR part 51

Zodiac Aerospace has issued Service Bulletin MXH-35-240, Revision 7, dated September 1, 2011; and Service Bulletin MXH-35-241, Revision 3, dated June 23, 2011. The service information describes procedures for inspecting and replacing defective harnesses with new or modified serviceable units. This service information is reasonably available at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2012-1107. Or see ADDRESSES for other ways to access this service information.

Costs of Compliance

We estimate that this AD affects 5,500 airplanes of U.S. registry.

We also estimate that it will take about 1 work-hour per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Required parts will cost \$0 per product. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$467,500, or \$85 per product.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator.

“Subtitle VII: Aviation Programs,” describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in “Subtitle VII, Part A, Subpart III, Section 44701: General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov/#!docketDetail;D=FAA-2012-1107>; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone 800-647-5527) is in the ADDRESSES section.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

2015-08-07 Zodiac Aerotechnics (formerly Intertechnique Aircraft Systems):

Amendment 39-18143. Docket No. FAA-2012-1107; Directorate Identifier 2011-NM-216-AD.

(a) Effective Date

This AD becomes effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Zodiac Aerotechnics (formerly Intertechnique Aircraft Systems) flightcrew oxygen mask regulators, all part number (P/N) MA10, MC10, MC20, MF10, MF20, MLC20, MLD20, MRA005, MRA022, and MRA023 series; certificated in any category; installed on, but not limited to, airplanes manufactured by Airbus, ATR, BAE Systems (Type Certificate previously held by British Aerospace), Boeing, Bombardier (Type Certificate previously held by Canadair, De Havilland Canada), Cessna, Dassault, EADS CASA, EMBRAER, Gulfstream, Hawker Beechcraft (Type Certificate previously held by Raytheon, Beech), Israel Aircraft Industries (IAI), McDonnell Douglas, Piaggio, Pilatus, Piper, and SOCATA.

(d) Subject

Air Transport Association (ATA) of America Code 35, Oxygen.

(e) Reason

This AD was prompted by a report of a malfunctioning mask having an inflatable harness with a high premature rupture rate due to defective silicon. We are issuing this AD to detect and correct defective harnesses, which could lead, in case of a sudden depressurization event, to a harness rupture, thereby providing inadequate

protection against hypoxia and possibly resulting in unconsciousness of the affected flightcrew member and consequent reduced control of the airplane.

(f) Compliance

You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

(g) Inspection

Except as provided by paragraph (i) of this AD: Within 24 months after the effective date of this AD, inspect the inflatable harness fitted to each flightcrew oxygen mask regulator to determine if the inflatable harness is installed with a part number and a batch number identified in Appendix I of Zodiac Aerospace Service Bulletin MXH-35-240, Revision 7, dated September 1, 2011 (for all airplanes other than Bombardier airplanes); or Appendix I of Zodiac Aerospace Service Bulletin MXH-35-241, Revision 3, dated June 23, 2011 (for Bombardier airplanes).

Note 1 to paragraph (g) of this AD: Referring only to Appendix II of Zodiac Aerospace Service Bulletin MXH-35-240, Revision 7, dated September 1, 2011; or Appendix II of Zodiac Aerospace Service Bulletin MXH-35-241, Revision 3, dated June 23, 2011; to identify a specific oxygen mask regulator is insufficient to demonstrate that the inflatable harness fitted to that oxygen mask regulator is not listed in Appendix I of Zodiac Aerospace Service Bulletin MXH-35-240, Revision 7, dated September 1, 2011; or Appendix I of Zodiac Aerospace Service Bulletin MXH-35-241, Revision 3, dated June 23, 2011.

(h) Replacement

If during the inspection required by paragraph (g) of this AD, an inflatable harness has a part number and batch number identified in Appendix I of Zodiac Aerospace Service Bulletin MXH-35-240, Revision 7, dated September 1, 2011 (for all airplanes other than Bombardier airplanes); or Appendix I of Zodiac Aerospace Service Bulletin MXH-35-241, Revision 3, dated June 23, 2011 (for Bombardier airplanes): Within 24 months after the effective date of this AD, replace the inflatable harness with a new or re-identified harness, in accordance with the Accomplishment Instructions of Zodiac Aerospace Service Bulletin MXH-35-240, Revision 7, dated September 1, 2011 (for all airplanes other than Bombardier airplanes); or Zodiac Aerospace Service Bulletin MXH-35-241, Revision 3, dated June 23, 2011 (for Bombardier airplanes).

(i) Exception

Oxygen mask regulators having a date of manufacturing (DMF) code of November 2008 (112008 or 11-08) or earlier, and those with a DMF code of January 2011 (012011 or 01-11) or later; and those having a part number listed in paragraph 1.A.(4), "Not Concerned Equipment," of Zodiac Aerospace Service Bulletin MXH-35-240, Revision 7, dated September 1, 2011, are excluded from the inspection and replacement requirements of paragraphs (g) and (h) of this AD, provided it can be demonstrated that the inflatable harness has not been replaced on those masks with an inflatable harness having a part number and batch number identified in Appendix I of the applicable service information specified in paragraph (i)(1) or (i)(2) of this AD. A review of airplane delivery or maintenance records is acceptable to make the

determination specified in this paragraph, if the part number and batch number of the harness assembly, and the DMF code of the mask assembly, can be conclusively determined from that review.

(1) Zodiac Aerospace Service Bulletin MXH-35-240, Revision 7, dated September 1, 2011 (for all airplanes other than Bombardier airplanes).

(2) Zodiac Aerospace Service Bulletin MXH-35-241, Revision 3, dated June 23, 2011 (for Bombardier airplanes).

(j) Definition

For the purpose of this AD, Bombardier airplanes include airplanes previously manufactured by Canadair or by De Havilland Canada.

(k) Parts Installation Prohibition

As of the effective date of this AD, no person may install a flightcrew oxygen mask regulator having a part number and batch number on the inflatable harness that is found in Appendix I of Zodiac Aerospace Service Bulletin MXH-35-240, Revision 7, dated September 1, 2011 (for all airplanes); on any airplane. Operators may determine if the part number and batch number are not listed in Appendix I of Zodiac Aerospace Service Bulletin MXH-35-240, Revision 7, dated September 1, 2011, by following the flow chart contained in paragraph 3., “Accomplishment Instructions,” of Zodiac Aerospace Service Bulletin MXH-35-240, Revision 7, dated September 1, 2011.

(l) Credit for Previous Actions

This paragraph provides credit for actions required by paragraph (g) of this AD, if those actions were performed before the effective date of this AD using the service

information specified in paragraphs (l)(1) through (l)(4) of this AD, as applicable, which are not incorporated by reference in this AD.

(1) Zodiac Aerospace Service Bulletin MXH-35-240, Revision 6, dated August 16, 2011 (for all airplanes other than Bombardier airplanes).

(2) Zodiac Aerospace Service Bulletin MXH-35-240, Revision 5, dated July 26, 2011 (for all airplanes other than Bombardier airplanes).

(3) Zodiac Aerospace Service Bulletin MXH-35-240, Revision 4, dated June 10, 2011 (for all airplanes other than Bombardier airplanes).

(4) Zodiac Aerospace Service Bulletin MXH-35-241, Revision 2, dated May 19, 2011 (for Bombardier airplanes).

(m) Alternative Methods of Compliance (AMOCs)

The Manager, Boston Aircraft Certification Office (ACO) ANE-150, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the ACO, send it to ATTN: Ian Lucas, Aerospace Engineer, Boston ACO, ANE-150, FAA, Engine and Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7757; fax: 781-238-7170. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(n) Related Information

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2011-0090R1, dated July 13, 2011, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov/#!documentDetail;D=FAA-2012-1107-0003>.

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (o)(3) and (o)(4) of this AD.

(o) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Zodiac Aerospace Service Bulletin MXH-35-240, Revision 7, dated September 1, 2011.

(ii) Zodiac Aerospace Service Bulletin MXH-35-241, Revision 3, dated June 23, 2011.

(3) For Zodiac Aerospace service information identified in this AD, contact Zodiac Services, Technical Publication Department, Zodiac Aerotechnics, Oxygen Systems Europe, 61 Rue Pierre Curie - CS20001, 78373 Plaisir Cedex, France; phone: (33) 01 61 34 23 23; fax: (33) 01 30 55 71 61; email: yann.laine@zodiacaerospace.com; Internet: www.services.zodiacaerospace.com.

(4) You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:
<http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

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Jeffrey E. Duven,
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